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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/939,294	08/24/2001	Yuan-pang Samuel Ding	1417Y P 524 (NPVC-5797)	2541

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MARK J. BUONAIUTO, ESQ.
BAXTER INTERNATIONAL INC.
LAW DEPARTMENT
ONE BAXTER PARKWAY, DF2-2E
DEERFIELD, IL 60015

EXAMINER

NOLAN, SANDRA M

ART UNIT

PAPER NUMBER

1772

DATE MAILED: 05/05/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/939,294

Applicant(s)

DING ET AL.

Examiner

Sandra M. Nolan

Art Unit

1772

-- The MAILING DATE of this communicati n appears on the cover she t with th c rrespondence address --

Peri d for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disp sition of Claims

- 4) ☒ Claim(s) 1-91 is/are pending in the application.
- 4a) Of the above claim(s) 17-91 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6,8-12,14 and 16 is/are rejected.
- 7) ☒ Claim(s) 5,7,13 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claims

1. Claims 1-91 are pending.

Election/Restrictions

2. Claims 17-91 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected inventions, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 8, that is, the response dated 01 April 2003 to the written restriction requirement in the 26 February 2003 office action (Paper No. 6).

Reasons for Maintaining Restriction Requirement

3. Applicants' arguments, in Paper No. 8, traversing the restriction have been considered. However, the reasons set forth in Paper No. 6 are still deemed appropriate.

It is noted, especially, that the classifications and searches for the non-elected elected claims (Groups II-IV) are not the same as that for the elected claims. The elected claims are drawn to mixed resins, not to tubing (classes 138/428), multilayer tubing (classes 138/428), or methods of making tubing (class 264).

Also, it is noted that Ono (US 4,752,137), the reference applied below for rejecting the claims of elected Group I, is classified in class 526, which is a resin class. The face if the Ono patent reveals that the reference was neither classified nor searched in any of classes 138, 264 or 428, which classes deal with tubing, plastic shaping and stock materials, respectively.

This application contains claims 17-91, drawn to an invention nonelected with traverse in Paper No. 8. A complete reply to any final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Allowable Subject Matter

4. Claims 5, 7, 13 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record does not teach or suggest the use of blends of syndiotactic 1,2-polybutadienes, wherein one or both of the syndiotactic 1,2-polybutadienes have low crystallinity.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
7. Claims 1-4, 6, 9-12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ono et al (US 4,742,137).

Ono teaches polymer particles containing a mixture of a first syndiotactic 1,2-polybutadiene (M.P. 70 degrees C.) and a second polymer (abstract). The second polymer has a high affinity for the first 1,2-polybutadiene and is a polybutadiene (col. 12, lines 41-48).

A mixture is deemed to be a blend.

Ono fails to teach that the second polybutadiene is syndiotactic 1,2-polybutadiene having a melting point higher than that of the first syndiotactic 1,2-polybutadiene.

It would have been obvious to one having ordinary skill in the art at the time that the invention was made to employ a second syndiotactic 1,2-polybutadiene as the second polymer in the particles of Ono in order to insure that the second polymer would have maximum affinity for the first syndiotactic 1,2-polybutadiene.

The motivation to employ a second syndiotactic 1,2-polybutadiene as the second polymer in the particles of Ono is found at col. 12, lines 41-48 of the patent. There, the second polymer is taught to have a high affinity for the syndiotactic 1,2-polybutadiene and polybutadiene is listed as a suitable second polymer.

The use of a second syndiotactic 1,2-polybutadiene having a higher melting point would have been an obvious way to increase the melting point of the polymer mixture and make it less susceptible to thermal degradation.

The irradiation recited in claim 9 is a process limitation and does not render the claimed polymer blend patentable.

8. Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ono as applied to claims 1-4, 6, 9-12 and 14 above, and further in view of JP-11228957A (abstract only).

Ono is discussed above. It fails to teach the hindered amines recited in claims 8 and 16.

The Japanese abstract teaches the use of hindered amines as stabilizers for 1,2-polybutadienes (see the underlined terms in the "Use" section). The stabilizers improve heat, light and oxidation stability (see "Advantage").

The references are analogous because they both deal with 1,2-polybutadienes.

It would have been obvious to one having ordinary skill in the art at the time that the invention was made to employ the hindered amines of the Japanese abstract at additives for the particles of Ono, in order to enhance their heat, light and oxidation stability.

The motivation to employ the hindered amines of the Japanese abstract at additives for the particles of Ono is found in the "Advantage" section of the abstract, where heat, light and oxidation stability of compositions containing the hindered amines is taught.

It is deemed desirable to make particles that have heat, light and oxidation stability in order to facilitate their processing.

Conclusion

Any inquiry concerning this communication should be directed to the Examiner, Sandra M. Nolan, whose telephone number is 703/308-9545. The Examiner can normally be reached on Monday through Thursday, from 6:30 am to 4:00 pm, Eastern Time.

If attempts to reach the Examiner by telephone are unsuccessful, her supervisor, Harold Pyon, can be reached at 703/308-4251. The general fax number for the art unit is 703/305-5436. The fax number for after final communications is 703/872-9310. The receptionist answers 703/308-0661.



S. M. Nolan
Patent Examiner
Technology Center 1700

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